Evidence-Based Approaches to Policy, Systems, & Environmental Change

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Goals for this Talk

- Wide range of experience in this room
- Common framework
- Common language
- Review the (rather limited) evidence base for which strategies are most effective

Different interventions are right for different communities, so I can't tell you where to focus. One of your most important jobs is to figure out which strategies will work best in your community.

General Obesity Prevention Goals

- Fruits & vegetables: 5 servings daily

- Sugar-sweetened beverages: 0 daily

- Physical activity: 1 hour daily

- Screen time: < 2 hours daily
  - Discourage all for children under 2 years of age

- Breastfeeding support

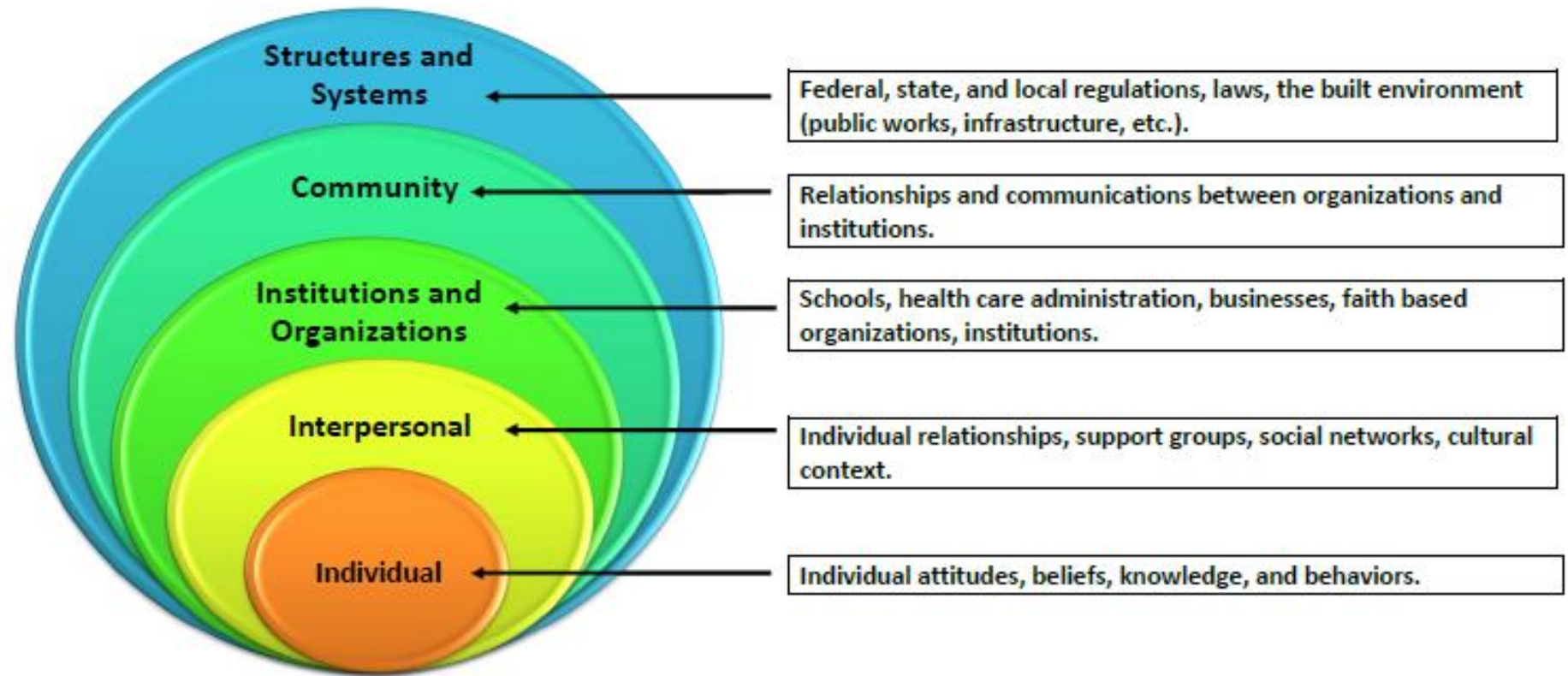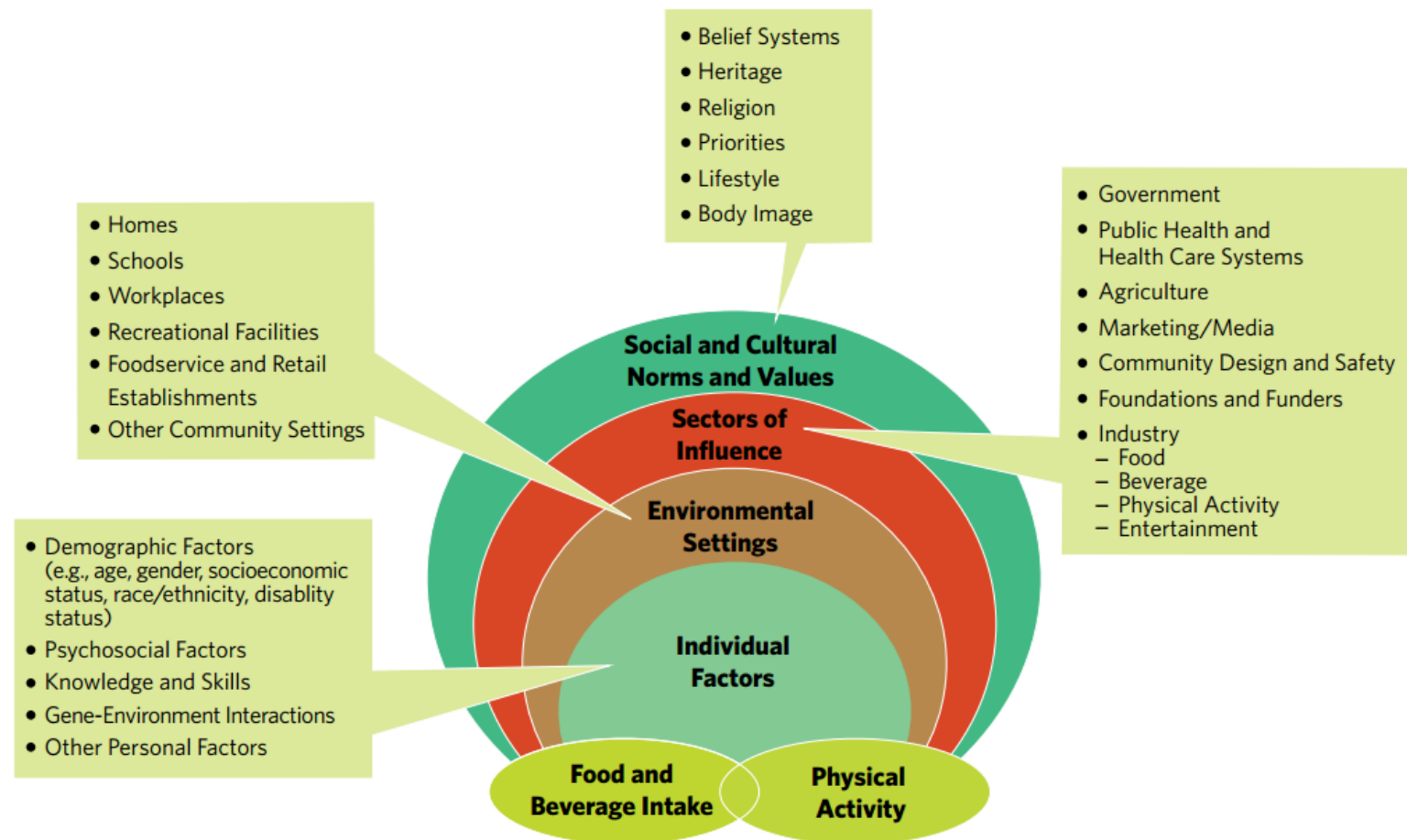# Social Ecological Model: Individual Health Behaviors are Broadly Influenced

Structures and Systems — Federal, state, and local regulations, laws, the built environment (public works, infrastructure, etc.).

Community — Relationships and communications between organizations and institutions.

Institutions and Organizations — Schools, health care administration, businesses, faith based organizations, institutions.

Interpersonal — Individual relationships, support groups, social networks, cultural context.

Individual — Individual attitudes, beliefs, knowledge, and behaviors.

Image courtesy of CDC

FIGURE 6 1: A Social Ecological Framework for Nutrition and Physical Activity Decisions

- Belief Systems
- Heritage
- Religion
- Priorities
- Lifestyle
- Body Image

- Government
- Public Health and Health Care Systems
- Agriculture
- Marketing/Media
- Community Design and Safety
- Foundations and Funders
- Industry
  - Food
  - Beverage
  - Physical Activity
  - Entertainment

- Homes
- Schools
- Workplaces
- Recreational Facilities
- Foodservice and Retail Establishments
- Other Community Settings

- Demographic Factors (e.g., age, gender, socioeconomic status, race/ethnicity, disablity status)
- Psychosocial Factors
- Knowledge and Skills
- Gene-Environment Interactions
- Other Personal Factors

Social and Cultural Norms and Values

Sectors of Influence

Environmental Settings

Individual Factors

Food and Beverage Intake

Physical Activity

Source: Adapted from: (1) Centers for Disease Control and Prevention. Division of Nutrition, Physical Activity, and Obesity. State Nutrition, Physical Activity and Obesity (NPAO) Program: Technical Assistance Manual. January 2008, page 36. Accessed April 21, 2010. http://www.cdc.gov/obesity/downloads/TA_Manual_1_31_08.pdf. (2) Institute of Medicine. Preventing Childhood Obesity: Health in the Balance, Washington (DC): The National Academies Press; 2005, page 85. (3) Story M, Kaphingst KM, Robinson-O'Brien R, Glanz K. Creating healthy food and eating environments: Policy and environmental approaches. Annu Rev Public Health 2008;29:253-272.

Evidence-Based Solutions

- Childhood Obesity Policy Research and Practice: Evidence for Policy and Environmental Strategies. *Amer Jl Prev Med*. 2014.

- Focused on vulnerable populations

- 1st Tier Effective: significant, positive individual outcomes and intermediate PSE impact; strong evidence from methodologically sound studies

- 2nd Tier Effective: significant, positive individual outcomes and PSE impact; moderate evidence

- Promising: meaningful, plausible individual and PSE impact; weaker evidence

- Emerging: newly implemented, untested innovations that appear to be valid and strong candidates for additional exploration

1st Tier Effective: Physical Activity

- Community and street design
- <u>School</u> policies and environments
- Social marketing/behavior nudging

1ˢᵗ Tier Effective: Physical Activity

- Community and street design
  - Urban design and land use policies that encourage activity, such as proximity between commercial and residential destinations
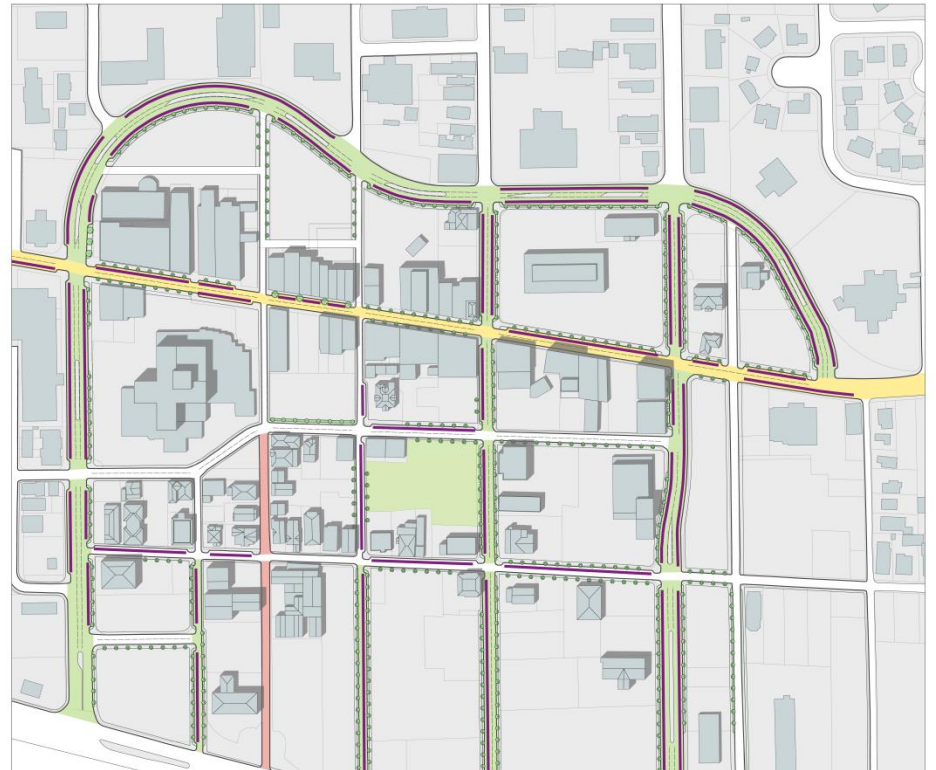
1st Tier Effective: Physical Activity

- Community and street design
  - Improved pedestrian-, bicycle-, or transit-oriented design (building setbacks, bike lanes, etc.)
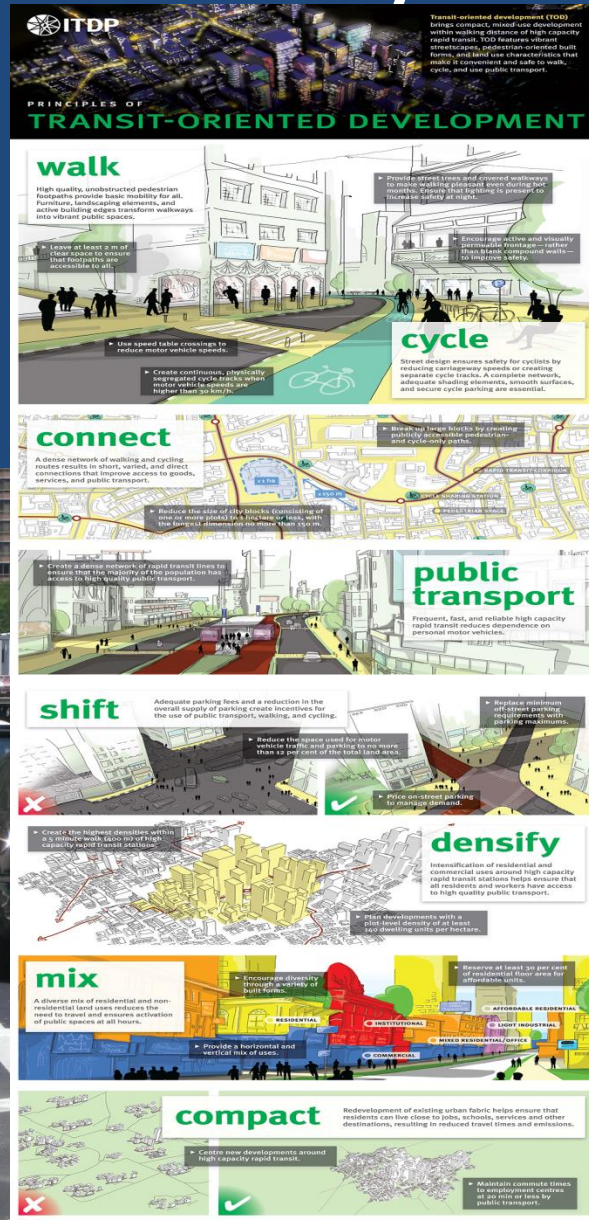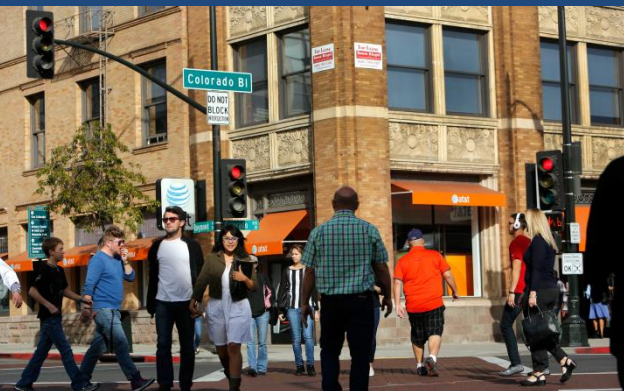
1ˢᵗ Tier Effective: Physical Activity

- Community and street design
  - Increased access to parks and recreation facilities for play, sports, or recreation

1ˢᵗ Tier Effective: Physical Activity

- <u>School</u> policies and environments
  - Standards to increase time in structured & unstructured play, sports or recreation (PE, recess, breaks) during school
  - Increased access to facilities & equipment (playgrounds, fields, courts, etc) at school

1ˢᵗ Tier Effective: Physical Activity

- Social marketing/behavior nudging

2nd Tier Effective: Physical Activity

- Transportation policies
- <u>Childcare</u> policies and environments

2nd Tier Effective: Physical Activity

- Transportation policies
  - Transportation design standards (eg Complete Streets—road networks that are safer, more livable, and more welcoming)
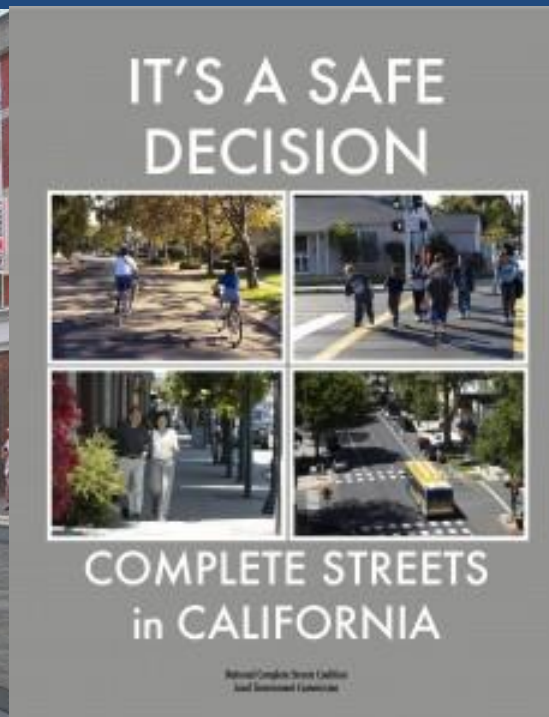
2nd Tier Effective: Physical Activity

- Childcare policies and environments
    - Standards to increase time in structured or unstructured play, sports, or recreation in preschool, daycare, and aftercare

Promising: Physical Activity

- Safe routes to school
- Traffic safety
- Interpersonal neighborhood safety

Promising: Physical Activity

- Safe routes to school
  - Increased opportunity to walk or bike to school (traffic safety, sidewalks or bike lanes, Walking School Bus)

Promising: Physical Activity

- Traffic safety
  - Traffic calming measures, reduced speed limits
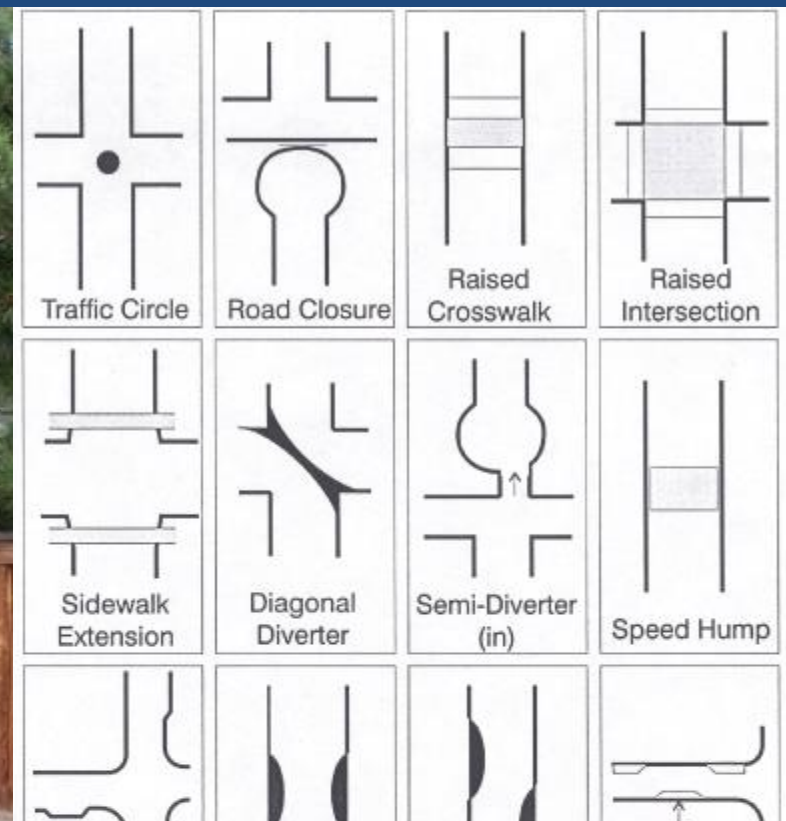
Promising: Physical Activity

- Interpersonal neighborhood safety
  - Reduced crime, reduced physical/social disorder, increased perception of safety

Emerging: Physical Activity

- Screen time in schools & childcare settings
- School wellness policies

Emerging: Physical Activity

- Screen time in schools & childcare settings
  - Decreased access to sedentary activities (TV/computer/video games)

Emerging: Physical Activity

- School wellness policies
  - Comprehensive school policies addressing physical activity & diet

1ˢᵗ Tier Effective: Nutrition
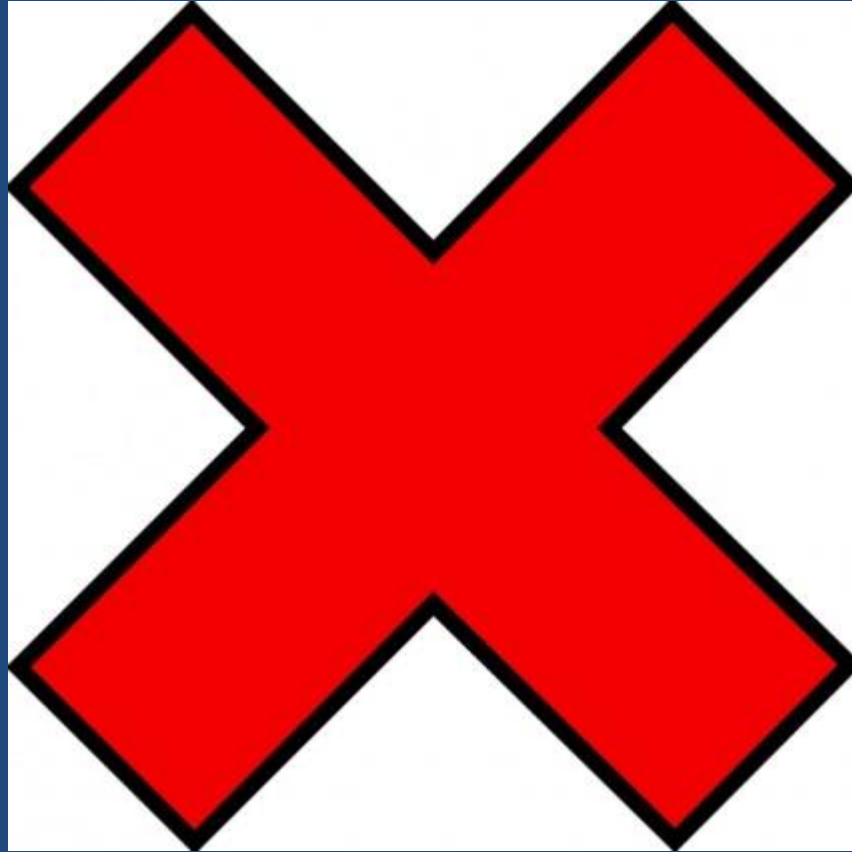
2ⁿᵈ Tier Effective: Nutrition

- Food & beverage policies in schools and childcare settings

- Food pricing

- Government nutrition assistance programs

2nd Tier Effective: Nutrition

- Food & beverage policies in schools and childcare settings
  - Standards to decrease access to unhealthy foods & beverages or increase access to healthy foods & beverages in preschool, daycare, afterschool, and school (meals, snacks, and vending)

2ⁿᵈ Tier Effective: Nutrition

- Food pricing
  - Changing food prices to encourage sale and consumption of healthy foods & beverages

2ⁿᵈ Tier Effective: Nutrition

- Government nutrition assistance programs
  - SNAP & WIC

Promising: Nutrition

- School wellness policies
  - Comprehensive school policies addressing physical activity & diet
- School and community gardens

Emerging: Nutrition

- Menu labeling
- Neighborhood availability of stores & restaurants
- Provision of free or subscription fruits and vegetables at school
- Provision of fresh, free drinking water at school
- Social marketing and behavior nudges

Emerging: Nutrition

- Menu labeling
  - Nutrition labeling at point of purchase

Emerging: Nutrition

- Neighborhood availability of stores & restaurants

    – New/redeveloped grocery stores and restaurants to increase access, sale & consumption of healthy foods and reduce unhealthy choices
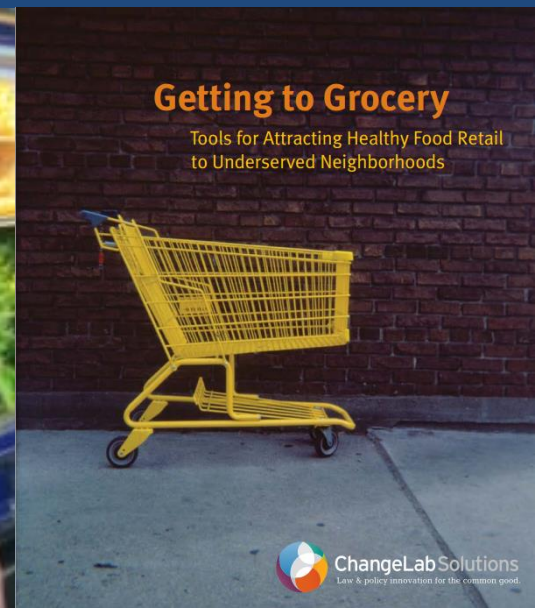
Getting to Grocery
Tools for Attracting Healthy Food Retail to Underserved Neighborhoods

ChangeLab Solutions
Law & policy innovation for the common good

Emerging: Nutrition

- Provision of free or subscription fruits and vegetables at school
  - Distribution of fruits & vegetables at lunch, breaks, class, and to eat outside of school

Emerging: Nutrition

- Provision of fresh, free drinking water at school

Emerging: Nutrition

- Social marketing and behavior nudges
  - Cues for healthy eating through product & shelf labeling, prompts, or other signage

Adult Obesity

- In general the same interventions apply
  - Land-use policies
  - Point-of-purchase incentives
  - Transportation policies
  - etc.
- School based interventions applied to work settings
  - Water access, healthy food vending machines, behavioral prompts (eg take the stairs)

Ideas People are Talking About

- Corner store conversions
- Keeping playgrounds open after school hours and on weekends
- Using schools as community centers to support obesity prevention efforts
- Workplace re-configuration & incentives
- Food subsidies & taxes

Can Providers Really Do This?

- Not on your own

- What can you give to this movement?
  - Voice of respect in the community
  - The human story ("This is what I see in my patients")
  - Passion, energy, expertise